

REMARKS

This application has been reviewed in light of the Office Action dated April 19, 2007. Claims 1, 3-12 and 15-18 are presented for examination, of which Claims 1, 12, 15, 17 and 18 are in independent form. Claims 2, 13 and 14 have been canceled, without prejudice or disclaimer of subject matter. Claims 1, 3, 4, 7, 12 and 15 have been amended to define still more clearly what Applicant regards as his invention. Claims 5, 6 and 8-10 have been amended as to matters of form only. No change in scope is intended or believed effected by at least these latter changes. Favorable reconsideration is requested. The canceled claims will not be further addressed herein.

A Claim To Priority and a certified copy of the priority document for this application were submitted to the International Bureau in International Application No. PCT/JP2004/005654, of which the application is the U.S. national phase. The Office Action fails to properly acknowledge receipt of the priority document in that the "All" box is not checked in paragraph 12(a) of the Office Action Summary. Applicant respectfully requests that this box be checked.

Claims 1, 3, 4, 9, 11, 12, 14 and 15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,869,837 (Huang).

Claims 5 and 6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Patent No. 5,841,180 (Kobayashi).

Claims 7, 8 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang in view of Japanese Patent No. 10-125891 (JP '891).

As shown above, Applicant has amended independent Claims 1, 12 and 15 in

terms that more clearly define what he regards as his invention. Applicant submits that these amended independent claims, and newly added independent Claims 17 and 18, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

Claim 1 is directed to a photoelectric conversion device including a plurality of pixels each having, as one unit, photoelectric conversion means for converting light into an electrical signal to accumulate therein electric charges, and transfer means for transferring the electric charges accumulated in the photoelectric conversion means, the plurality of pixels being disposed in a matrix. The device also includes means for sweeping out the electric charges accumulated in the photoelectric conversion means through a control line for the transfer means of the pixels disposed along a line adjacent to the photoelectric conversion means concerned. The photoelectric conversion means has at least a first electrode and a second electrode connected to said transfer means. The means for sweeping out uses a capacitor between the second electrode of the photoelectric conversion means and the control line for the transfer means of the pixels disposed along the line adjacent to the photoelectric conversion means, and a voltage change of the control line in a reading operation for the pixels disposed along the adjacent line, to sweep out the electric charges accumulated in the photoelectric conversion means.

Among other notable features of Claim 1 is means for sweeping out the electric charges accumulated in the photoelectric conversion means through a control line for the transfer means of the pixels disposed along a line adjacent to the photoelectric conversion means concerned, wherein the means for sweeping out uses a capacitor between the second electrode of

the photoelectric conversion means and the control line for the transfer means of the pixels disposed along the line adjacent to the photoelectric conversion means, and a voltage change of the control line in a reading operation for the pixels disposed along the adjacent line, to sweep out the electric charges accumulated in the photoelectric conversion means.

Huang relates to an imaging system having a pixel including a readout switch 1 having a control terminal connected to one of a plurality of parallel control lines 7, an output terminal connected to one of a plurality of parallel data lines 6, and an input terminal connected to a storage capacitor 2 having a capacitance Cs. The storage capacitor 2 is connected to a radiation detector 4 and a reset switch 3. Huang discusses that a bias voltage is applied to the radiation detector 4 such that when exposed to radiation (e.g. X-rays), electrical charges (e.g. electrons and holes) are generated in the radiation detector and stored on capacitor 2. A vertical scanner (Fig. 3) generates control signals on successive ones of the control lines 7 for enabling successive rows of the readout switches of an array of pixels, for discharging successive rows of the storage capacitors 2. Huang further discusses that the signal charge from each capacitor 2 is applied to a data line 6 for subsequent readout.

However, Applicants have found nothing in Huang that would teach or suggest “means for sweeping out the electric charges accumulated in said photoelectric conversion means through a control line for said transfer means of said pixels disposed along a line adjacent to said photoelectric conversion means concerned, wherein ...said means for sweeping out uses a capacitor between said second electrode of said photoelectric conversion means and said control line for said transfer means of said pixels disposed along the line adjacent to said photoelectric conversion means, and a voltage change of said control line in a reading operation for said pixels

disposed along the adjacent line, to sweep out the electric charges accumulated in said photoelectric conversion means," as recited in Claim 1 (emphasis added).

Accordingly, Applicant submits that Claim 1 is not anticipated by Huang.

A review of the other art of record including Kobayashi and JP '891, has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as a reference against Claim 1.

Independent Claims 12, 15, 17 and 18 recite features similar to those discussed above with respect to Claim 1 and, therefore, are also believed to be patentable over the cited prior art for the reasons discussed above.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration or reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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